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Form Approved
OMB No. 0704-0188



o average 1 hour per response, including the time for reviewing instructions, searching existing data sources, ring the collection of information. Send comments regarding this burden estimate or any other aspect of this in, to Washington Headquarters Services, Directorate for information Operations and Reports, 1215 Jefferson of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

DATE

01/06/78

3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE
ACTION LEVELS FOR POISONOUS OR DELETERIOUS SUBSTANCES IN HUMAN FOOD AND
ANIMAL FEED

5. FUNDING NUMBERS

6. AUTHOR(S)

TISLER, J.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

8. PERFORMING ORGANIZATION REPORT NUMBER

FOOD AND DRUG ADMINISTRATION WASHINGTON, DC

84338R01

9. SPONSORING/MONITORING AGENCY NAMES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

1917

94-35034

12a. DISTRIBUTION/AVAILABILITY STATEMENT

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

13. ABSTRACT (Maximum 200 words)

THIS LIST OF CURRENT ACTION LEVELS FOR POISONOUS OR DELETERIOUS SUBSTANCES IN HUMAN FOOD OR ANIMAL FEED WAS ESTABLISHED BY THE FOOD AND DRUG ADMINISTRATION TO CONTROL LEVELS OF CONTAMINANTS IN FOOD AND FEEDS. IN ACCORDANCE WITH TITLE 21, CODE OF FEDERAL

REGULATIONS, PART 509.4 ACTION LEVELS FOR POISONOUS OR DELETERIOUS SUBSTANCES MAY BE ESTABLISHED AND WILL BE REVOKED WHEN A TOLERANCE FOR THE SAME SUBSTANCE AND USE BECOMES EFFECTIVE. THIS LIST IS CURRENT AS OF JANUARY 6, 1978. IT IS. THE RESPONSIBILITY OF THE USER OF THE LIST TO KEEP UP-TO-DATE ON THE ACTION LEVELS, EITHER NEW ACTION LEVELS WHICH MAY BE ESTABLISHED OR FOR ANY REVISION OR REVOCATION OF EXISTING ACTION LEVELS. THE LEVELS REPRESENT THE LIMIT AT OR ABOVE WHICH FDA WILL TAKE LEGAL ACTION AGAINST THE PRODUCT TO REMOVE IT FROM THE AMARKET. WHERE NO ESTABLISHED TOLERANCE OR ACTION LEVEL EXISTS, THE FDA MAY TAKE LEGAL ACTION AGAINST THE PRODUCT AT THE MINIMUM DETECTABLE LEVEL.

DIE QUALITY INSPECTED 5

14. SUBJECT TERMS

TOXICITY, PLANTS, CHEMICALS

94 1110

066

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT
UNCLASSIFIED

18. SECURITY CLASSIFICATION OF THIS PAGE

19. SECURITY CLASSIFICATION OF ABSTRACT

20. LIMITATION OF ABSTRACT

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DEPARTMENT OF HEALTH, EDUCATION, AND WELARE

POOD AND DRUG ADMINISTRATION WASHINGTON, D.G. 1221 To: Requestors of Action Levels for Poisonous or Deleterious Substances in Human Food and Animal Feed Booklet We are sending you a copy of the "Action Levels for Poisonous or Deleterious Substances in Human Food and Animal Feed" that you requested in your recent letter.

The Food and Drug Administration does not charge for this publication. However, we have a limited supply, and can send only one copy to you. You are free to reproduce this document if you desire.

We hope that the necessity to limit the number of copies will not present a hardship to you. If we can be of additional assistance, please contact us.

Sincerely yours

84338R01 original

> John M. Tisler Chief, Industry Guidance Branch Bureau of Focds

action Levels for

is or Deleterious lances in Human Animal

DUE

Rocky Mountain Arsenal Information Center Commerce City, Colorado

nclosure

Poisonous or Deleterious Substances in Human Action Levels for Food and Animal Feed

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Justification	sation	
By		
Distribution/	ution/	
A	Availability Codes	
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lhis list of current action levels for poisonous or deleterious substances in human food or animal feed was established by the Food and Orug Administration to control levels of contaminants in food and feeds. In accordance with Title 21, <u>Code of Federal Regulations</u>, Part 109.4, and Part 509.4 action levels for poisonous or deleterious substances may be established and will be revoked when a tolerance for the same substance and use becomes effective.

This list is current as of January 6, 1978. It is the responsibility of the user of the list to keep up-to-date on the action levels, either new action levels which may be established or for any revision or revocation of existing action levels. Notices will be published in the Federal Register when this occurs.

The levels represent the limit at or above which FDA will take legal action against the product to remove it from the market. Where no established tolerance or action level exists the FDA may take legal action against the product at the minimum detectable level. *Thense Note to remove it from the market.

lot of the same or another food is not permitted and renders the final food unlawful regardless The mixing of a food containing any amount of a substance above the action level with another of the level of the substance in the finished food.

in the attached action level list from the Public Records and Document Center, FDA (HFC-18) 5600 Fishers Lane, Rockville, Maryland 20857. The memoranda described are filed under Docket No. 77N-0166 at the Hearing Clerks Office, FDA (HFC-20) 5600 Fishers Lane, Rockville, Maryland 20857. fou may request the Administrative Guidelines which are referenced

For further assistance, call or write to the following FDA offices:

Food and Drug Administration
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Bureau of Foods (HFF-312)
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Washington, D.C. 20204
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Food and Drug Administration Industry Guidance Branch Bureau of Foods (HFF-342) 200 C Street, S.W. Washington, D.C. 20204 Phone (202) 245-1523 Additional single copies of this list are available from the Industry Guidance Branch at the

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Chlordane		4	
Crotolaria Seeds		4	
Dimethoate & Dimethoate Oxygen Analog		ب ر	
TOO			_
001,10E,00E	• .	ഹ	
Endrin		•	
Fenthion	•	. ω	
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SUBSTANCE	сомморіту	ACTION LEVEL	REFERENCE
Aflatoxín	Brazil Nuts Foods and Feeds Peanuts & Peanut Products Pistachio Nut	20 mcgs/kg 20 mcgs/kg 20 mcgs/kg 20 mcgs/kg	7412.01. 7420.01 7412.03 7412.05
Aldrín & Dieldrin	Animal Feed, processed Artichokes Blackberries	0.03 ppm 0.05 ppm 0.05 ppm	7426.04 - A 7420.09 - A
	Blueberries Boysenberries Butter (fat basis)	0.05 ppm 0.05 ppm 0.3 ppm	
	s roduc cture		7420.09 - A 7420.08 - D
		0.05 ppm 0.03 ppm 0.05 ppm 0.3 ppm	7420.09 - A " " " 7426.04 - A
•	raw ed smoked berries	0.3 ppm 0.05 ppm 0.05 ppm	1 1 1
	(dilimat Kleberries anberries ons (unle	0.03 ppm 0.05 ppm 0.05 ppm 0.15 ppm	7420.09 - A 7420.09 - A " " " "

SUBSTANCE	COMMODITY	ACTION LEVEL	REFERENCE
Aldrin & Dieldrin	Milk (fat basis), raw	0.3 ppm	7420.09A
	Raspberries Shellfish, raw edible	0.05 ppm 0.3 ppm	= = = =
	portion Shellfish, smoked, frozen, canned Sugarbeet Pulp (animal feed) Sugarbeet Pulp (human food)	0.3 ppm 0.1 ppm 0.1 ppm	7420.08 - D 7420.04 - A 7420.08 - D
Azodrin	Peppers Squash Strawberries	0.1 ppm 0.1 ppm 0.1 ppm	TWXRUEVEHQ0002 Nemo, 2-25-74 from Sam D. Fine Assoc, Commis- sioner for Compliance
Benzene Hexachloride (BHC)	Animal Feed, processed Artichokes Barley, grain (animal feed) Barley, grain (human food)	- 10 1	7426.04 - B 7420.09 - B 7426.04 - B 7420.09 - B
	Beets Blackberries Blueberries Boysenberries Butter (fat basis)	0.5 0.5 0.5 0.5 0.3 0.3 0.3 0.3	7420.08 - A

SUBSTANCE BHC (continued)

COMMODITY	ACTION LEVEL	LEVEL	REFERENCE
Carrots	0.5 ppm	E	7420.09 B
Fruit		Ē	=
		Ę	=
fresh s		Ē	= = =
Corn, grain (animal feed)		Ē	7426.04 - 8
Corn, grain, (human food)	,	Ē	7420.09 - B
Cranberries		E	=======================================
Currants	0.5 ppm	E	=======================================
		E	7420.08 - A
manufactured, excluding low . fat daiwn products			
Deuberries	, c	Ę	9 00 001
. Eqqs		= E	
Elderberries		: 6	=======================================
Endive		E	=======================================
Figs	വ	: E	
Frog Legs, edible portion	کا	Ē	7420.08 - A
		Ē	= =
Guavas	5.	Ē	=
Hays (animal feed)			7426.04 - B .
Huckleberries	0.5 ppm	E	7420.09 - B
Loganberries	ಬ		=======================================
Mangoes	0.5 ppm	Ē	=======================================
Milk (fat basis), raw, undactourized	0.3 ppm	Ē	=
Milo. Sorohums (animal feed)	שטט ניט		4 - 10 3617
Sorohums (human f		€ €	7420 09 - R
grain (an		: E	7426.04 - 8
grain (human	0.1 ppm	E	7420.09 - 8
Peas	ഹ	E	: ::
Pineapples		Ē	=======================================
Potatoes	0.5 ppm		=

(continued)

SUBSTANCE BHC (continued)	Quinces Radishes Radishes Ratishes Ratishes Rice, grain Rutabagas Rye, grain (animal feed) Rye, grain (human food) Sweet Potatoes Turnips Turnip Greens or Tops Wheat, grain (animal feed)	ACTION LEVEL 0.5 ppm 0.5 ppm 0.1 ppm 0.1 ppm 0.5 ppm	REFERENCE 7420.09 - 8 7426.04 - 8 7420.09 - 8 7426.04 - 8 7420.09 - 8	•
Cadmium	Pottery (Ceramics) and Enamelware	0.5 mcgs/ml of leaching Solution	7417.02	
Chlordane	Animal Fat, rendered Animal Feed, processed	0.8 ppm 0.1 ppm	7426.04 - D	
Crotolaria Seeds C. spectabilis and/or <u>C. striata</u>	Grains and Feeds	Average of 1 whole seed/ pound	7426.03	

	from ssoc or or con con coker		
REFERENCE	MEMO, 2-25-74 from Sam D. Fine, Assoc Commissioner for Compliance Memos of Telecon 3-14-75 and 1-20- 76, Curtis E. Cokel	7420.09 - E	7426.05 - E 7420.09 - F 7420.09 - F 7420.09 - F 7420.09 - F 7420.09 - F 7426.04 - E 7426.04 - E 7426.04 - E 7425.09 - F 7425.09 - F 7425.09 - F 7426.09 - F 7426.09 - F
EVEL	. 6	. •	
ACTION LEVEL	0.1 ppm 0.1 ppm 0.2 ppm	2.0 ppm	0.55 Ppm 0.5
- i	000	2.	
COMMODITY	Cucumber Squash Strawberries	Cocoa Beans, whole raw bean	Animal Feed, processed Barley, grain (animal feed) Barley, grain (human food) Corn, grain (animal feed Corn, grain (human food) Eggs Fish, raw Fish, smoked, frozen, canned Hay Milo (Sorghum), grain (animal feed) Milo (Sorghum), grain (human food) Oats, grain (animal feed) Rice, grain (human food) Rice, grain (animal feed) Rice, grain (animal feed) Rye, grain (human food) Wheat, grain (human food)
SUBSTANCE	Dimethoate & Dimethoate Oxygen Analog	. 100	DDT. TDE, DDE

SUBSTANCE	соммортту	ACTION LEVEL	REFERENCE
Endrin		0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm	7426.04 - F 7420.09 - G
	Corn, fresh sweet Cranberries Currants Oairy Products (fat basis), manufactured, excluding low fat dairy products Dewberries Eiges Eiges Endive Fish Meal, Fish Solubles, Fish oil (animal feed) Fish, raw edible portion Fish, smoked, frozen, canned Gooseberries Grapes Grapes	0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.3 ppm 0.03 ppm 0.05 ppm	7420.08 - E 7420.09 - G 7420.09 - C 11

SUBSTANCE	CUIMODITY	ACTION LEVEL	REFERENCE
	Guavas	0.05 ppm	= =
	HUCK Leberries.		: =
Engrin (continued)	NA 16		: ±
	+ hacdel		=
		•	
	lettuce	0.05 nnm	= = .
	Loganberries		=
	Mangoes	0.05 ppm	n
•	Melons		=======================================
	Mustard Greens		
	Nectarines		= =
	Oilseed Meal, peanut, soybean,		7426.07 - F
	cottonseed, etc. (animal feed)		
		0.05 ppm	7420.09 - 6
•	Onions	0.05 ppm	= =
	Peaches	0.05 ppm	7420.09 - 6
	Pears		
	Peas	0.05 ppm	= :
	Pimentoes		=======================================
	Pineapples	05	=======================================
	Plums		=======================================
	Pumpkins	05	7420.09 - G
	Quinces		= =
	Radishes	05	=======================================
	Raspberries	CS	=======================================
		02	= -
	itish, raw edible porti	0.3 ppm	=
	Snellīlsh, smoked, frozen, canned	0.3 ppm	7420.08 - E

(continued)

SUBSTANCE	COMMODITY	ACTION LEVEL	REFERENCE
Endrin (continued)	Spinach Strawberries Sweet Potatoes Turnips Turnip Green Vegetable Oils & Fats, including soapstock (animal feed)	0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.05 ppm 0.3 ppm	7420.09 - G " " " " " " 7426.04 - F
Fenthion	Ground Red Peppers	. mdd E.O	Memo dated 8-12- 74 from Henry J. Korp., EPA
Heptachlor & Heptachlor Epoxide	Animal Feed, processed Apricots Artichokes Asparagus Beans, except snap beans Broccoli Celery Citrus Fruit Collards Cranberries Cucumbers Cucumbers Cucrants Dairy Products (fat basis), mahufactured, excluding low fat dairy products Eggslant Elderberries (continued)	0.03 ppm 0.05 ppm	7426.04 - G 7420.09 - H 7420.09 - H 7420.09 - H 7420.09 - H H 7420.09 - H H 7420.09 - H H H H H H H H H H H H H H H H H H H

	Fndive	0.05 nnm	= =
	. 0		=======================================
Heptachlor &	Fish, raw edible portion	, m	= =
Heptachlor Epoxide		0.3 ppm	7420.08 - F
(continued)	berries	0.05 ppm	7420.09 - H
	Hays	0.03 ppm	7426.04 - G
•	Huckleberries	05	7420.09 - H
	Kale		11 11
	Loganberries	.05	æ æ
	Melons	.05	a .
	Mustard Greens	.05	= = .
	Nectarines	.05	= = =
	Okra	2	=======================================
	Parsley	0.05 ppm	= = = :
	Pears		=======================================
	· Pimentoes	.05	=======================================
•	Plums		= .
	Pumpkins		= = =
	Quinces		=======================================
	rafn (antwal		7426.04 - G
•	e. grain (huran food	0.03 ppm	7420.03 - H
•	llfish, raw, edi	0.3 ppm	
	Shellfish, smoked, frozen, canned	0.3 ppm	7420.03 - F
	Spinach	0.05 ppm	
	usents	0.07 true	
	100000000000000000000000000000000000000		, ,
	من فرز ورد می میکنده ایر		:
-			
	, r	0.05 ppm	=
	nice, oquash	0.05 ppm	=======================================

SUBSTANCE	COMMODITY	ACTION LEVEL	REFERENCE
1.1 Bis (p-Chlorophenyl) -2,2,2,-trichloroethanol (Kelthane)	Animal Feed, processed Tangelos	0.5 ppm 10 ppm.	7420.04 - H 7420.09 - I
Ke pone	Crabs, raw edible portion Crabs, edible portions, frozen or canned Fish, raw edible portion Fish, smoked, frozen, canned Shellfish (oysters, clams, mussels) raw edible portion Shellfish (oysters, clams, mussels) smoked, frozen, canned	0.4 ppm 0.3 ppm 0.3 ppm 0.3 ppm 0.3 ppm	7420.09 - 0 7420.08 - K 7420.09 - 0 7420.08 - K 7420.09 - 0
Lead	Evaporated M11k	0.5 ppm	
	Pottery (Ceramics) and Enamelware Silver-plated Holloware	7 mcgs/ml 741 of leaching solution 7 mcgs/ml of 741 leaching solution if product intended for use by adults	7417.03 I If 7417.01 Sution Sutended adults
		0.5 mcgs/ml of leaching solution if product intended for use by infants and children	l of olution intended infants en

SUBSTANCE

Lindane

			•
	COMMODITY	ACTION LEVEL	REFERENCE
	Animal Feed, processed	0.1 00m	7426.04-1
		0.5 ppm	7420.09-3
	Barley (animal feed)	0.1 ppm	7426.04-I
	_	_	7420.09-J
		വ	=
	Beets, garden	ι.	=
	Blackberries	5	=
•	Blueberries	s.	=
	Boysenberries	0.5 ppm	=======================================
	Butter (fat basis)	0.3 ppm	7420.08-6
		0.5 ppm	7420.09-J
	Citrus Fruits	0.5 ppm	=
	Cocoa Beans, whole raw bean	0.5 ppm	=
٠	fresh	0.5 ppm	=
	grain		7426.04-1
	grain (<u>ن</u> ے	7420.09-3
	rries	0.5 ppm	=
	Currants	0.5 ppm	=
	Dairy Products (fat basis),	0.3 ppm	7420.08-6
	manufactured, excluding low		
	fat dairy products		
	Dewberries	0.5 ppm	7420.09-3
	Eggs	0.5 ppm	=======================================
	Elderberries		=
	Endive	S	=
	Figs	2	=
	Gooseberries	0.5 ppm	=
	Hays .	O.l ppm	7426.04-1
	Huckleberries	0.5 ppm	7420.09-J
		0.5 ppm	***
	Milk (fat basis), raw,	0.3	=
	Steurized		. 40
	Milo, Sorghums (4nimal feed) Milo, Sorghums (human food)	0.1 ppm	7420.09-3
_			

SUBSTANCE	COMMODITY	ACTION LEVEL	REFERENCE
Mirex	Fish	0.1 ppm	Memo, 5-7-76 from
Monitor	Produces (except those for which tolerances are established)	0.1 ppm	EPA Wemo 3-21-73 from John R. Wessel. Wemo 3-19-73 from Douglas D. Campt.
Paralytic Shellfish Toxin	Clams, Mussels, Oysters, fresh, frozen, canned	80 micrograms/ 100 grams meat	:/ 7408.04 it
Phosvel	Peppers Green Beans	0.1 ppm 0.1 ppm	Nemo, 2-25-74 from Sam D. Fint Assoc. Commis- sioner for Compliance
Polybrominated Biphenyls (PBB's)	Milk & Dairy Products (fat basis) Meat (fat basis) Eggs Animal Feed	0.3 ppm 0.03 ppm 0.05 ppm 0.05 ppm	"A Review of Congressman Wm. M. Brodhead's Petition to Reduce FDA's Action Level: for Polybromominated Biphenyls (PBB) In Food", July 27, 1977

(continued)

	•		
SUBSTANCE	COMMODITY	ACTION LEVEL	REFERENCE
Polychlorinated Biphenyls (PCB's)	Paper food - packaging material intended for or used with human food, finished animal feed & any components intended for animal feeds	10 ppm	21 CFR 109.30(a) (9) Tolerance stayed on 8-24-73 (38 FR 22794)
Toxaphene	Animal Feed, processed Artichokes Asparagus Ueets Blueberries	0.5 ppm 1.0 ppm 1.0 ppm 1.0 ppm	7426.04 - M 7420.09 - P " " "
	Curries Currants Figs	mqq 0.1 0.0 mqq 0.1	= = =
	Fish, raw edible portion Fish, smoked, frozen, canned Grapes Melons	5.0 ppm 5.0 ppm 1.0 ppm	7420.08 - J 7420.09 - P
	Mustard Greens Plums Potatoes	0.0 0.0 mgq 0.0	•
	Pumpkins Squash Summer Squash Sweet Potatoes Turnips Turnip Greens or Tops Winter Squash	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	

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